Environmental Restoration Contractor **ERC Team**

Interoffice Memorandum

TO: C. D. Wittreich, H9-12

DATE: [illegible]96

COPIES: See Below

FROM: Duane Jacques
Analytical Services/Field Services
H9-10/372-9400

45097

SUBJECT: **200-UP-1 IRM IMPLEMENTATION SAMPLING, MONTHLY GROUNDWATER RESULTS, FEBRUARY 1996, REV 0**

REFERENCES:

1. BHI, 1995a, *Field Screening (On-Site Measurements) Quality Assurance Plan*, BHI-EE-08, Bechtel Hanford, Inc., Richland, Washington.

2. BHI, 1995b, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.

3. BHI, 1995, *200-UP-1 Field Screening Support Logbook*, EL-1277, Bechtel Hanford, Inc., Richland, Washington.

4. ChemChek, 1994, *Operation and Service Manual, Kinetic Phosphorescence Analyzer KPA-11*, ChemChek Instruments, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support the 200-UP-1 IRM Implementation Sampling program. The Quality Assurance level for this work corresponds to QA-2 as specified in the reference 1 (BHI 1995a). The samples were managed under SAF B96-059.

Attachment 1 contains Volatile Organic Compound (VOC), total uranium, and technetium-99 results for groundwater samples collected to support the referenced project. The VOC results were generated using a Photovac 10S Plus portable gas chromatograph in accordance with Field Screening Procedure (FSP) 1.1, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water* (BHI 1995b). Information concerning operation of the gas chromatograph is contained in the instrument logbook EL-1269.

The total uranium results were generated using a ChemChek KPA-11a Kinetic Phosphorescence Analyzer. The KPA-11a was calibrated and operated in accordance with the instrument operating manual (ChemChek 1994). Information concerning use of the ChemChek KPA-11a as well as preparation of VOC calibration standards and samples is contained in the referenced field logbook EL-1277, pages 73 through 78.

The technetium-99 analyses were conducted at the 222-S Laboratory. The results are included in this data package for information only. Questions concerning the analyses and results should be directed to the laboratory.

Please contact me if you have any questions on this information.

Duane Jacques

Duane Jacques, Scientist

QA Review by: Paul E Nuerksen

IDJ:idj

Attachments: Attachment 1. 200-UP-1 IRM Implementation Sampling, Monthly Groundwater Results, February 1996
Attachment 2. Sample Chain of Custody Sheets

Copies:
C. W. Denslow, H9-02, w/attachment 1 only
A. Hopkins, H9-11, w/attachment 1 only
J. A. Lerch, B1-35, w/a
D. A. Myers, H9-11, w/attachment 1 only
R. O. Mahood, H9-11, w/attachment 1 only
W. S. Thompson, N1-28, w/attachment 1 only
IDJ - File, w/attachment 1 only
BHI Document Control, H4-79, w/a

Attachment 1

200-UP-1 IRM Implementation Sampling

Monthly Groundwater Results, February 1996

SAF B96-059

Sample Location	*HEIS Number*	*Sample Date*	*Analysis Date (VOA)*	*Chloroform (µg/L)*	*Carbon TetraCl (µg/L)*	*TCE (µg/L)*	*Uranium (µg/L)*	*Technetium-99 (pCi/L)*
299-W19-3	B0H712	2/29/96	2/29/96	3.3u	230	<2.0	799	176
299-W19-20	B0H714	2/28/96	2/29/96	5.1	107	3.1	1200	8660
299-W19-23	B0H716	2/28/96	2/29/96	4.8	150	1.2u	712	24200
299-W19-24	B0H718	2/28/96	2/29/96	<4.0	86	1.6u	2570	11300
299-W19-28	B0H720	2/26/96	2/29/96	<4.0	9.5	<2.0	1040	6260
299-W19-29	B0H722	2/27/96	2/29/96	<4.0	3.4	<2.0	159	857
299-W19-30	B0H724	2/26/96	2/29/96	<4.0	120	<2.0	660	31000
299-W19-34A	B0H726	2/29/96	3/1/96	5.5	53	1.8u	1.1	148
299-W19-35	B0H728	2/27/96	2/29/96	<4.0	150	5.9	81	549
299-W19-37	B0H730	2/26/96	2/29/96	<4.0	108	<2.0	3610	10900
299-W19-38	B0H732	2/29/96	3/1/96	<4.0	11	<2.0	216	621
299-W19-40	B0H734	2/29/96	3/1/96	4.6	22	<2.0	208	1300
Field Blank @ 299-W19-35	B0H736	2/27/96	2/29/96	<4.0	<2.0	<2.0	<0.50	<100
Trip Blank	B0H737	2/26/96	2/29/96	<4.0	<2.0	<2.0	NA	NA
Trip Blank	B0H738	2/27/96	2/29/96	<4.0	<2.0	<2.0	NA	NA
Trip Blank	B0H739	2/28/96	2/29/96	<4.0	<2.0	<2.0	NA	NA
Trip Blank	B0H740	2/29/96	3/1/96	<4.0	<2.0	<2.0	NA	NA

NA - Not Analyzed

u - Value less than practical quantitation limit

Analyst: I. D. Jacques 3/20/96

I. D. Jacques

VOA Instrument: Photovac 10S Plus GC, Serial # BJDG203
Method: 5 mL/min HP Air, 11.7 eV lamp, 250 uL injection
Logbook: Photovac Instrument Log, EL-1269, pgs 25 - 26

Uranium Instrument: ChemChek KPA-11a, Serial # 9445050065
Method: Kinetic Phosphorescence
Logbook: 200-UP-1 Project Log, EL-1277, pgs 76 - 78

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Bechtel Hanford, Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	Page 1 of 1
		Data Turnaround: ☐ Priority ■ Normal

Collector: A. Rizzo / M. Mehlhorn	Company Contact: C. D. Wittreich	Telephone: (509) 372-9315
Project Designation: 200-UP-1 IRM Implementation Sampling - 2nd Quarter 1996, Feb	Sampling Location: 200 West	SAF No.: B96-059
Ice Chest No.	Field Logbook No.: EFL-1135	Method of Shipment: Hand Delivered
Shipped To: Duane Jacques	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA
Possible Sample Hazards/Remarks		

SAMPLE ANALYSIS	Preservation	Cool 4°C	HCl									
	Type of Container	P/G	Gs									
	No. of Container(s)	1	1									
Special Handling and/or Storage: Maintain samples between 2°C and 6°C.	Volume	20mL	40mL									
		Total Uranium	VOA - TCL									

Sample No.	Matrix*	Date Sampled	Time Sampled									
B0H712	W	2-29-96	1000	X	X							
B0H740	W	2-29-96	0730		X							
B0H732	W	2-29-96	1140	X	X							
B0H734	W	2-29-96	1300	X	X							
B0H726	W	2-29-96	1420	X	X							

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Sign/Print Names	Date/Time
Relinquished By	A. Rizzo / M. Mehlhorn	2/29/96 1430	Received By: D. Jacques / Duane Jacques ERC	2/29/96 1430
Relinquished By		Date/Time	Received By	Date/Time
Relinquished By		Date/Time	Received By	Date/Time
Relinquished By		Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS
Hold all samples at 4701-C until project is completed. Then deliver to Duane Jacques.

Matrix*
S = Soil
SE = Sediment
SO = Solid
SL = Sludge
W = Water
O = Oil
A = Air
DS = Drum Solids
DL = Drum Liquids
T = Tissue
WI = Wipe
L = Liquid
V = Vegetation
X = Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

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Bechtel Hanford, Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	Page 1 of 1
		Data Turnaround ☐ Priority ■ Normal

Collector: A. Rizzo / B. Kahlberg	Company Contact: C. D. Wittreich	Telephone: (509) 372-9315
Project Designation: 200-UP-1 IRM Implementation Sampling - 2nd Quarter 1996, Feb	Sampling Location: 200 West	SAF No.: B96-059
Ice Chest No.	Field Logbook No.: EFL-1135	Method of Shipment: Hand Delivered
Shipped To: Duane Jacques	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA
Possible Sample Hazards/Remarks		
Special Handling and/or Storage: Maintain samples between 2°C and 6°C.		

Sample No.	Matrix*	Date Sampled	Time Sampled	Preservation: Cool 4°C	Preservation: HCl	Type of Container: P/G	Type of Container: Gs	No. of Container(s): 1	No. of Container(s): 1	Volume: 20mL	Volume: 40mL	SAMPLE ANALYSIS: Total Uranium	SAMPLE ANALYSIS: VOA - TCL
B0H730 / 259-W19-37	W	2-26-96	1020	X	X								
B0H737 / 4701-C	W	2-26-96	0730		X								
B0H724	W	2-26-96	1126	X	X								
B0H720	W	2-26-96	1245	X	X								

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By	Date/Time
Relinquished By	A G Rizzo (EC)	2-27-96 0800	Received By: B. Wathen	2-27-96 0800
Relinquished By	B. Wathen	2-29-96 0845	Received By: D Jacques ERC	2-29-96 0845
Relinquished By		Date/Time	Received By	Date/Time
Relinquished By		Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS
Hold all samples at 4701-C until project is completed. Then deliver to Duane Jacques.

Matrix*
S = Soil
SE = Sediment
SO = Solid
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W = Water
O = Oil
A = Air
DS = Drum Solids
DL = Drum Liquids
T = Tissue
WI = Wipe
L = Liquid
V = Vegetation
X = Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

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Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page 1 of 1

Data Turnaround: ☐ Priority ■ Normal

Collector: A. Rizzo / M. Mehlhorn	Company Contact: C. D. Wittreich	Telephone: (509) 372-9315
Project Designation: 200-UP-1 IRM Implementation Sampling - 2nd Quarter 1996, Feb	Sampling Location: 200 West	SAF No.: B96-059
Ice Chest No.	Field Logbook No.: EFL-1135	Method of Shipment: Hand Delivered
Shipped To: Duane Jacques	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA
Possible Sample Hazards/Remarks	Preservation: Cool 4°C / HCl	
	Type of Container: P/G / Gs	
	No. of Container(s): 1 / 1	
Special Handling and/or Storage: Maintain samples between 2°C and 6°C.	Volume: 20mL / 40mL	
SAMPLE ANALYSIS	Total Uranium / VOA - TCL	

Sample No.	Matrix*	Date Sampled	Time Sampled	Total Uranium	VOA - TCL
B0H714	W	2-28-96	1035	X	X
B0H718	W	2-28-96	1210	X	X
B0H716	W	2-28-96	1430	X	X
B0H739	W	2-28-96	0730		X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
M. Mehlhorn	2-29-96 0800	ERC	0800
ERC	0845	ID Jacques	0845
Bechtel	2-29-96	Duane Jacques ERC	2-29-96

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X = Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

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Bechtel Hanford, Inc. — CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Data Turnaround: ☐ Priority ■ Normal

Collector: A. Lizzo, M. Mehlhorn	Company Contact: C. D. Wittreich	Telephone: (509) 372-9315
Project Designation: 200-UP-1 IRM Implementation Sampling - 2nd Quarter 1996, Feb	Sampling Location: 200 West	SAF No.: B96-059
Ice Chest No.	Field Logbook No.: EFL-1135	Method of Shipment: Hand Delivered
Shipped To: Duane Jacques	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA
Possible Sample Hazards/Remarks		
Special Handling and/or Storage: Maintain samples between 2°C and 6°C.		

Sample No.	Matrix*	Date Sampled	Time Sampled	Preservation: Cool 4°C	Preservation: HCl	Type of Container: P/G	Type of Container: Gs	No. of Container(s): 1	No. of Container(s): 1	Volume: 20mL	Volume: 40mL	SAMPLE ANALYSIS: Total Uranium	SAMPLE ANALYSIS: VOA - TCL
B0H722 / 299-W19-29	W	2.27.96	0945		X		X				X	X	
B0H738 / TRIP	W	2.27.96	0730				X				X		X
~~B0H736 / 299-W19-5TH~~	~~W~~	~~2.27.96~~	2.27.96 (A)		~~X~~		~~X~~				~~X~~	~~X~~	~~X~~
B0H736 / Field Blank	W	2.27.96	1115		X		X				X	X	
B0H738 / 299-W19-35	W	2.27.96	1251		X		X				X	X	

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By	M. Mehlhorn Mark Mahlhorn 1410	2-27-96
Received By	Lisa Wilhelm B. Wittreich	1410 2-27-96
Relinquished By	Lisa Wilhelm B. Wittreich	0845 2-29-96
Received By	Duane Jacques ERC	0845 2-27-96
Relinquished By		
Received By		
Relinquished By		
Received By		

SPECIAL INSTRUCTIONS
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LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Author: Donald J Hammervold at ~WHC321
Date: 3/4/96 4:47 PM
Priority: Normal
TO: Thomas S Tenforde at ~PNL20
TO: Michael R Fox at ~WHC347
TO: David E Eakin at ~PNL19
TO: Michael D Brown at ~PNL19
TO: Craig R Richins at ~DOE20
TO: Julie K Turner at ~DOE20
TO: Mark A Coronado at ~DOE23
TO: Alan E Waltar at ~WHC63
TO: Gerald (Gerry) Woodcock at ~WHC300
TO: Jim G Field at ~WHC340
TO: Robert E Schenter at ~WHC53
TO: Xiangdong Feng at ~PNL56
TO: Maynard J Plahuta at ~DOE23
CC: Raymond J II (Ray) Puigh at ~WHC53
CC: Daniel I (Dan) Herborn at ~WHC300
CC: Duane G Horton at ~WHC133
CC: A J (Tony) DiLiberto at ~WHC301
CC: Glendon W Gee at ~PNL27
CC: Clayton L Looney at ~WHC344
CC: Richard G (Rick) McCain at ~BHI004
CC: Donald J Hammervold
Subject: Agri-Energy 1996 Spring Workshop Re-focused
---------- Message Contents ----------

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3/4/96

TO: Those Listed

Tom Tenforde	Xiangdong Feng
Mike Fox	Maynard Plahuta
Dave Eakin	Mike Brown
Craig Richins	Julie Turner
Mark Coronado	Larry Albin
Alan Waltar	Bob Schenter
Gerry Woodcock	Jim Field

FROM: Don Hammervold

SUBJECT: Agri-Energy 1996 Spring Workshop Re-focused

The planned USDA Hanford tour and workshop is a followup to Hanford's commitment last November in Spokane to be proactive in teaming with USDA to share knowledge and technology and create mechanisms to identify new areas and programs for USDA/DOE collaboration. This meeting has been refocused to a more local/regional meeting. It has been acknowledged that the Secretaries of Agriculture and Energy have given the go ahead to initiate proactive regional participation by MOU. With mutual concurrence, it was decided to bring local focus to this workshop by hosting regional USDA scientists, engineers, and program administrators here at Hanford. The spring USDA tour and workshop will inform USDA associates about Hanford facilities and resources as well as allow the sharing of our knowledge on potential technology transfer applications for Agriculture.

Due to the need to restructure the Agri-Energy Spring Workshop, the Tuesday March 5th planning meeting for this workshop is canceled. We need to start structuring this workshop by identifying the Hanford presenters and topical areas of presentation. The following is a list of potential areas of presentation.

Water Quality	Agriculture/Nuclear Education
Technology Transfer	Food Technologies
Pest Control	Cleanup Technologies
Instrumentation & Measurement	Fertilizers/Plant Growth

We are looking for more individuals at Hanford that have potential agriculture technology transfer applications. Please contact Don Hammervold by ccmail or on 376-0995 concerning your interest in presenting at this workshop. If you know about others at Hanford that have technologies that may apply to agriculture, please notify me or forward this information to them. This workshop provides Hanford a unique opportunity to build a strong bond and lasting cooperative relationship with our associates in USDA. The main objective of this workshop is to build trust and cooperation between USDA & DOE and thus leverage both USDA & DOE technologies and resources to meet the 21st Century needs for Agriculture and Energy. Thank You

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HEADSPACE GAS CHROMATOGRAPHY CHECKLIST

1.	Date:		3/20/96
2.	a.	Minimum 3 point calibration curve:	yes; but calibration based on single standa
	b.	Date 3 point minimum calibration curve was prepared:	10/25/95
3.	Calibration Check Standard		
	a.	Check standard for each analyte:	Yes
	b.	Date of analysis:	2/29/96
	c.	Date of check standard:	2/29/96
	Calculation Check (One Standard)		
	d.	Show calculation:	$0.60\ \mu L \times 1400\ mg/mL =$ $0.840\ mg/30\ mL = 28\ mg/L$ TCE
	e.	Agrees with analyst:	Yes
3.	a.	Is a sample dilution required?	NO; cal check is near sample conc
	b.	If yes, check calculation.	NA
4.	If data has been converted from ppm to ppb or vice versa, check conversion.		NA
5.	Analyte Identification		
	a.	Confirmed by MS:	not done
	b.	Confirmed by second column:	not done
6.	Average temperature of laboratory during analysis:		73° F
7.	a.	Reviewer's name:	Paul E Duerksen
	b.	Reviewer's signature:	PAUL E DUERKSEN 3/20/96

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HEADSPACE GAS CHROMATOGRAPHY CHECKLIST

1.	Date:		3/20/96
2.	a.	Minimum 3 point calibration curve:	yes; but calibration based on single standard
	b.	Date 3 point minimum calibration curve was prepared:	10/25/95
3.	Calibration Check Standard		
	a.	Check standard for each analyte:	Yes
	b.	Date of analysis:	3/1/96
	c.	Date of check standard:	3/1/96
	Calculation Check (One Standard)		
	d.	Show calculation:	0.65 µL x 8700 mg/mL = 5655 = 5.66 mg/mL 30 = 0.19 mg/mL = 190 mg/L Chloroform
	e.	Agrees with analyst:	Yes
3.	a.	Is a sample dilution required?	No; cal check is near sample conc
	b.	If yes, check calculation.	NA
4.	If data has been converted from ppm to ppb or vice versa, check conversion.		NA
5.	Analyte Identification		
	a.	Confirmed by MS:	not done
	b.	Confirmed by second column:	not done
6.	Average temperature of laboratory during analysis:		71° F
7.	a.	Reviewer's name:	PAUL E DUERKSEN
	b.	Reviewer's signature:	Paul E Duerksen 3/20/96